

Remarks

Applicant has reviewed the Office Action dated as mailed January 18, 2007. After the above amendments have been made, the present application contains claims 1-4, 6-15, and 106-109. Claim 1 has been amended and new claims 106-109 have been added.

Claim Rejections Under 35 U.S.C. §103

Claims 1, 2, 7, 10-12, and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,770,844 to Morita (hereinafter Morita) in view of US Patent No. 5,841,089 to Martinenas (hereinafter Martinenas) and US Patent No. 6,380,505 to Stoops et al. (hereinafter Stoops). This rejection is respectfully traversed. Applicant respectfully submits that this rejection under 35 U.S.C. §103 does not follow the M.P.E.P. §706.02(j) which states:

“After indicating that the rejection is under 35 U.S.C. §103, the examiner should set forth in the Office Action: . . . (B) the difference or differences in the claim over the applied reference(s), (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and (D) an explanation of why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification . . . The teaching or suggestion to make the claimed combination and the reasonable expectation of the success must both be found in the prior art and not based on applicant’s disclosure.” *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991).

As indicated in the Office Action, Morita in Figure 7 shows three emitting units 13 for directing a laser beam 16 on a laser welding portion 15. In contrast, Martinenas in Figures 7 and 9 teaches a single welding electrode 134 mounted in a rotor gear 128 which is rotated about a tube 140 being arc welded. Similar to Martinenas, Stoops in Figures 4A and 4D teach a welding electrode 70 mounted in a rotor 74 which is rotated about a tube 18 (Figure 4D) for welding two portions of tubing together. Accordingly, Applicant respectfully submits that there is no teaching or suggestion in Morita, Martinenas and Stoops that there teaching may be combined so as to provide the present invention as recited in the claims. A person of skill in the art would not be motivated to combine the plurality of laser emitting units of Morita with the rotary welding

apparatus of Martinenas and Stoops and such motivation can only come from Applicant's disclosure.

Even if it were proper to combine the teachings of Morita, Martinenas and Stoops, they still would not provide the present invention as recited in the claims. Claim 1 has been amended to recite "wherein the plurality of energy beam transfer devices are fixedly mounted to the housing and are stationary during processing of the workpiece." Applicant respectfully submits that there is no teaching or suggestion in Morita that the laser emitting units 13 are fixedly mounted to a housing and are stationary during processing of the laser welding portion 15. Additionally, as previously discussed, the welding electrodes of both Martinenas and Stoops are mounted in a rotary gear and are rotated about a tube during welding. Accordingly, neither Martinenas nor Stoops teach or suggest a plurality of energy beam transfer devices that are fixedly mounted to the housing and are stationary during processing of the workpiece as provided by the present invention as recited in amended claim 1. For all of the reasons discussed above, Applicant respectfully submits that claim 1 is patentably distinguishable over Morita, Martinenas and Stoops, whether considered individually or combined, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of independent claim 1 is respectfully requested.

Regarding claims 2, 7, 10-12 and 15, these claims depend either directly or indirectly from independent claim 1, and by virtue of that dependency, contain all of the features of independent claim 1. Therefore, these claims are also submitted to be patentably distinguishable over Morita, Martinenas and Stoops, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of these claims is also respectfully requested.

Claims 3 and 4 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morita in view of Martinenas and Stoops and further in view of U.S. Patent No. 3,622,743 to Muncheryan. Muncheryan was cited for showing a lens and describing a switching device. As previously discussed, Applicant respectfully submits that a person of ordinary skill in the art would not be motivated to combine the teachings of Morita, Martinenas and Stoops and that a person of skill in the art also would not be motivated to combine Muncheryan with these documents for the same reasons discussed above. Even if it were proper to combine these documents, Applicant respectfully submits that they still would not provide the present invention

as recited in the claims. Claims 3 and 4 depend directly from independent claim 1. Because of this dependency, claims 3 and 4 contain all of the features of claim 1. Muncheryan adds nothing to the teachings of Morita, Martinenas and Stoops so as to render independent claim 1 unpatentable. Therefore, claims 3 and 4 are also submitted to be patentably distinguishable over the cited documents, and reconsideration and withdrawal of the Section 103 rejection of claims 3 and 4 is respectfully requested.

Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Morita in view of Martinenas and Stoops and further in view of U.S. Patent No. 4,953,292 to Tobey (hereinafter “Tobey”). Tobey teaches a tube cutting unit 120 mounted to a bevel gear 60, which is driven by a driver bevel gear 144 to cut a piece of tubing T as illustrated in Figures 1 and 2 of Tobey. In contrast to Tobey, Morita, Martinenas and Stoops each teach welding mechanisms for welding two separate pieces of tubing together. Accordingly, Applicant respectfully submits that a person of skill in the art would not be motivated to combine the teachings of Tobey with Morita, Martinenas and Stoops. Even if it were proper to combine the teachings of Tobey with Morita, Martinenas and Stoops, they still would not provide the present invention as recited in the claims. Claim 6 depends directly from independent claim 1, and by virtue of that dependency, contains all of the features of claim 1. Applicant respectfully submits that Tobey adds nothing to the teachings of Morita, Martinenas and Stoops so as to render independent claim 1 unpatentable. Further, as previously discussed, Tobey teaches that the cutting unit is mounted to a rotatable bevel gear, which is rotated about the tubing to cut the tubing. Therefore, Tobey also does not teach or suggest a plurality of energy beam transfer devices that are fixedly mounted to a housing and are stationary during the processing of a workpiece as provided by the present invention as recited in amended claim 1. For all of these reasons, Applicant respectfully submits that claim 6 is patentably distinguishable over Morita, Martinenas, Stoops and Tobey, whether considered individually or combined, and reconsideration and withdrawal of the Section 103 rejection of claim 6 is respectfully requested.

Claims 8 and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morita, Martinenas and Stoops and in further view of JP356047756A. JP356047756A was cited for teaching centering pins and the use thereof in annular pipe clamping. Applicant respectfully

submits that there is no motivation to combine the teachings of JP356047756A with Morita, Martinenas and Stoops, for the same reasons as previously discussed. Additionally, claims 8 and 9 depend either directly or indirectly from independent claim 1 and by virtue of that dependency contain all of the features of claim 1. Applicant respectfully submits that JP356047756A adds nothing to the teachings of Morita, Martinenas and Stoops so as to render independent claim 1 unpatentable. Therefore, claims 8 and 9 are also submitted to be patentably distinguishable over the cited documents, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claims 8 and 9 is respectfully solicited.

Claims 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Morita in view of Martinenas and Stoops as applied to claim 7 and further in view of U.S. Patent No. 5,869,801 to Paton et al. (hereinafter “Paton”). Paton was cited for adaptation of tooling for operation in space. Claims 13 and 14 depend directly from independent claim 1. Applicant respectfully submits that Paton adds noting to the teachings of Morita, Martinenas and Stoops so as to render independent claim 1 unpatentable. Thus, Applicant respectfully submits that claims 13 and 14 are also patentably distinguishable over the combination of documents, and reconsideration and withdrawal of the Section 103 rejection of claims 13 and 14 is respectfully solicited.

New claims 106-109 each recite additional features which are not taught or suggested by the documents of record in the present application. New claim 106 recites:

“wherein each energy beam transfer device is angled to allow the energy beam from each energy beam transfer device to overlap with the energy beam from adjacent energy beam transfer devices on the workpiece to substantially completely cover around the exterior surface of the workpiece.”

Morita in Figure 7 clearly shows each of the laser beams 16 being focused at a discreet point on the workpiece and does not teach or suggest that the energy beam from each energy beam transfer device overlaps the energy beam from adjacent transfer devices as provided by the present invention as recited in new claim 106. Additionally, claim 106 depends directly from independent claim 1 and contains all of the features of claim 1. Therefore, Applicant respectfully

submits that claim 106 is patentably distinguishable over the documents of record and allowance of claim 106 is respectfully requested.

New claim 107 recites:

“a housing to enclose the energy beam transfer devices and at least a portion of the workpiece to be processed, wherein the housing includes:

a first part; and

a second part, wherein the first part and the second part are pivotably coupled for movement relative to one another to releasably enclose at least the portion of the workpiece to be processed and wherein the energy beam source is attached to the second part; and

a lever attached to the first part of the housing and extending from the housing adjacent to the energy beam source, wherein the lever is movable toward and away from the energy beam source to open and close the first and second parts of the housing to releasably enclose at least the portion of the workpiece to be processed.”

Applicant respectfully submits that there is no teaching or suggestion in the documents of record of the energy beam source being attached to the second part of the housing and a lever being attached to the first part of the housing and extending from the housing adjacent to the energy beam source, wherein the lever is moveable toward and away from the energy beam source to open and close the first and second parts of the housing. Applicant respectfully submits that new claim 107 is patentably distinguishable over the documents of record and allowance of this claim is respectfully requested.

New claim 109 recites:

“a first transfer device support coupled to an interior of the first part of the housing to support a first group of the plurality of energy beam transfer devices, wherein the first transfer device and the first group of the plurality of energy beam transfer devices are stationary during processing of the workpiece; and

a second transfer device support coupled to an interior of the second part of the housing to support a second group of the plurality of energy beam transfer devices, wherein the second transfer device and the second group of the plurality of energy beam transfer devices are stationary during processing of the workpiece.”

Applicant respectfully submits that there is no teaching or suggestion in the documents of record of these features provided by the present invention as recited in claim 109. Therefore,

claim 109 is respectfully submitted to be patentable over the documents of record and allowance of claim 109 is respectfully solicited.

Conclusion

For the foregoing reasons, the Applicant respectfully submits that all of the claims in the present application are in condition for allowance. Reconsideration and withdrawal of the rejections and allowance of the claims at the earliest possible date are respectfully requested.

If the Examiner has any questions about the present Amendment or anticipates finally rejecting any claim of the present application, a telephone interview is requested.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 13-4365.

Respectfully submitted,

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